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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,534

03/05/2007

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1933 7590 07/06/2010
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EXAMINER

WEEKS, GLORIA R

ART UNIT

PAPER NUMBER

3721

MAIL DATE

DELIVERY MODE

07/06/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,534	Applicant(s) HANSSON ET AL.	
	Examiner GLORIA R. WEEKS	Art Unit 3721	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is in response to the amendment and remarks received on April 7, 2010.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 10 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Jenkins (USPN 3,901,098).

In reference to claims 10 and 15, Jenkins discloses a power tool comprising: a housing 3; an output shaft 26 driven by a rotation motor 5; and an angle drive mechanism coupling the motor 5 to the output shaft 26, the angle drive mechanism including: a one-piece drive spindle 7 and pinion 8 coupled to the motor 5; a bevel gear mounted 14 on the output shaft 26; wherein the drive spindle 7 is axially supported relative to the housing by a ball bearing 10 having an inner ring 6 and an outer ring 12; and an adjusting device which sets an axial position of the drive spindle 7 and the pinion 8 relative to the bevel gear 14; wherein the outer ring 12 is axially secured relative to the housing 3; and wherein the adjusting device comprises: a threaded portion on said drive spindle 7; an internal thread formed integrally with the inner ring 6 and arranged to cooperate with the threaded portion on the drive spindle; and a coupling device 18.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 11-13 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (USPN 3,901,098 in view of Johnson (USPN 3,838,588)

Regarding claims 11-13 and 16-18, Jenkins discloses a power tool comprising: a one-piece drive spindle 7 and pinion 8 axially supported relative to the housing by a ball bearing 10 having an inner ring 65 and an outer ring 12; and an adjusting device which sets an axial position of the drive spindle 7 and the pinion 8 relative to the bevel gear 14; wherein the outer ring 12 is axially secured relative to the housing 3; and wherein the adjusting device comprises: a threaded portion on said drive spindle 7; an internal thread formed integrally with the inner ring 6, wherein the inner ring 6 is positioned at a recess of the spindle and is arranged to cooperate with the threaded portion on the drive spindle; a coupling ring 18; and a lock ring 17. Jenkins does not disclose the coupling ring 18 to have teeth.

Johnson teaches a power tool comprising: a spindle 27 connected to a coupling ring 41, the coupling ring having inner teeth 40 that cooperate with splines 39 on the spindle 27. It would have been obvious to one having ordinary skill in the art at the time of the invention to modify the coupling ring and spindle of Jenkins to include inner teeth, since Johnson suggests

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that such a modification secures the coupling ring into a desired orientation with respect to the spindle, which is found to be desired based on column 4 lines 6-22 of Jenkins.

6. Claim 14 and 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jenkins (USPN 3,901,098 in view of Yakura et al. (USPN 6,709,161).

With respect to claims 14 and 19, Jenkins discloses a power tool comprising: a one-piece drive spindle 7 and pinion 8 axially supported relative to the housing by a ball bearing 10 having an inner ring 65 and an outer ring 12, but does not disclose the ball bearing as an angular contact ball bearing. It would have been obvious to one having ordinary skill in the art at the time of the invention to replace the ball bearing of Jenkins with a angular contact ball bearing, since column 3 lines 1-4 of Yakura et al. teaches an angular contact ball bearing assists with lubrication of the bearing thus prolonging life of the bearing during high speed rotation and reducing cost.

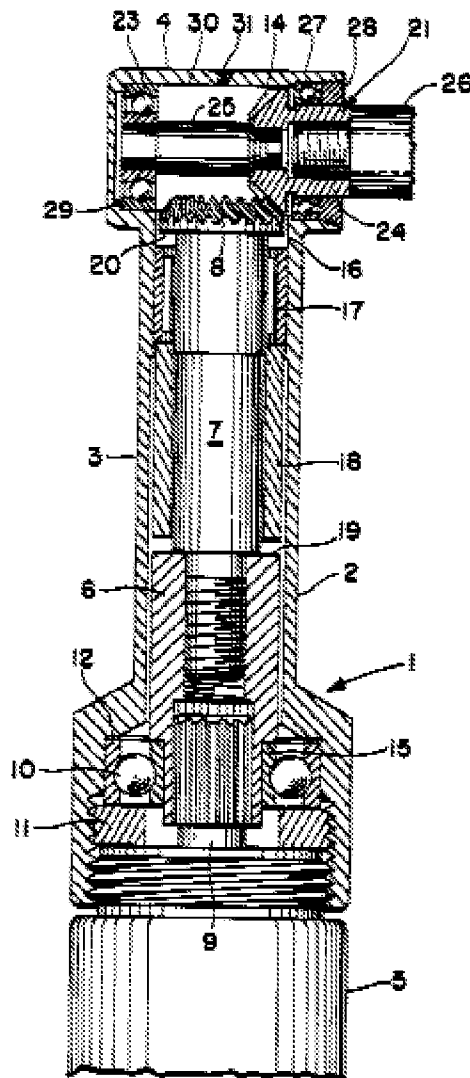
Response to Arguments

7. Applicant's arguments filed April 7, 2010 with respect to Jenkins have been fully considered but they are not persuasive.

8. In response to applicant's argument that Jenkins fails to disclose a drive adapter to which the drive spindle shaft portion 7 is secured by screw threads, Examiner has provided the diagram of the device disclosed by Jenkins below. As shown, the drive spindle shaft portion 7 has three distinct section of which a first section of a first diameter includes the gear 8 on a first end; the second section of a second diameter is oriented between the first section and a third section of the shaft portion 7, wherein the third section is defined by threads. An inner ring 6 of a ball bearing 10 has internal threads that receive the threads of third section of the shaft portion 7.

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The threads of the third section of the shaft portion 7 thereby permit the shaft portion 7, and subsequently gear 8, to adjust relative to the inner ring 6.



While the second section of drive spindle shaft portion 7 has a shoulder that engages a surface of inner ring 6, thereby limiting the axial adjustment of the shaft portion 7 towards the inner ring; the gear 8 and the shaft portion 7 may be axially adjusted away from the inner ring 6 according to the length of the third section of the shaft portion. Although Jenkins discloses

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adjustment of the shaft portion 7 relative to the inner ring 6 prior to the coupling the motor with the inner ring, the shaft portion 7 is adjustable relative to the inner ring 6 as claimed, nonetheless.

Column 3 lines 1-16 of Jenkins disclose the arrangement of coupling device 18 along with lock ring 17 relative to inner ring 6 and shaft portion 7, for the purpose of securing and limiting axial movement of the spindle shaft portion and inner ring. Such a locked position is accomplished due to the press fit of the lock ring 17 with bore 16 as the shaft portion 7 and inner ring are axially adjusted.

9. As stated on page 8 of Applicant's arguments filed April 7, 2010, secondary reference Johnson teaches a spindle that axially adjusts to a locked position per the engagement of splines 37-38. Although Johnson does not disclose a spindle including a bevel gear, Examiner has relied upon Johnson merely for its teaching of axially securing a spindle from a first axial position to a second axial position via splines; wherein such a teaching is found to suggest to one of ordinary skill in the art at the time of the invention that the modification of the axially adjustable spindle of Jenkins to include splines as an axial locking element would have been obvious. Column 3 lines 7-28 of Jenkins state that coupling 18 guides lock ring 17 into a locked position, wherein the axial orientation of coupling 19 relative to the bevel gear and spindle is predetermined and essential to the adjustment of the spindle. Such a disclosure is found to support Examiner's motivation for modifying Jenkins in view of Johnson.

In light of the response(s) provided above, Examiner maintains the rejection of Applicant's claimed invention in view of Jenkins.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to GLORIA R. WEEKS whose telephone number is (571)272-4473. The examiner can normally be reached on M-Th 8am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rinaldi I. Rada can be reached on (571) 272-4467. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Other helpful telephone numbers are listed for applicant's benefit:

- Allowed Files & Publication (888) 786-0101
- Assignment Branch (800) 972-6382
- Certificates of Correction (703) 305-8309
- Fee Questions (571) 272-6400
- Inventor Assistance Center (800) PTO-9199
- Petitions/special Programs (571) 272-3282
- Information Help line 1-800-786-9199

/Gloria R. Weeks/
Examiner, Art Unit 3721

/Rinaldi I Rada/
Supervisory Patent Examiner, Art Unit
3721

July 6, 2010